ThinkPad® X220 (4291) - Onsite (May 2011)

Type-model	Processor	Memory	Widescreen display	Camera	Disk SATA GB[8] rpm	Optical in UltraBase	ThinkPad Ultrabase Series 3	PCIe Mini Card WLAN	PCIe Mini Card WWAN	Finger print reader	Blue-tooth	Bat-tery cells	Intel vPro	Global (G) GMP (P)	Pre-load
4291-48U	i7-2620M	4GBx1	12.5" HD Prem		160G SSD	Optional	Optional	Intel 6300[28]	WWAN upg	Fing	Blue	***9***	vPro	G P	Pro 64
4291-47U	i7-2620M	4GBx1	12.5" HD Prem		320G 7200	Optional	Optional	Intel 6300	WWAN upg	Fing	Blue	6	vPro	G P	Pro 64
4291-46U	i5-2520M	4GBx1	12.5" HD		320G 7200	Optional	Optional	Intel 6300	WWAN upg	Fing	Blue	6	vPro	G P	Pro 64
4291-45U	i7-2620M	4GBx1	12.5" HD		320G 7200	Optional	Optional	Intel 6300	WWAN upg	Fing	Blue	***9***	vPro	G P	Pro 64
4291-43U	i5-2520M	4GBx1	12.5" HD	720p	128G SSD	Optional	Optional	Intel 6205[28]	WWAN upg	Fing	Blue	6	vPro	G P	Pro 64
4291-44U	i5-2520M	4GBx1	12.5" HD	720p	320G 7200	Optional	Optional	Intel 6205	WWAN upg	Fing	Blue	6	vPro	G P	Pro 64
4291-42U	i5-2540M	4GBx1	12.5" HD Prem		128G SSD	Optional	Optional	Intel 6300	WWAN upg	Fing	Blue	6	vPro	G P	Pro 64
4291-4XU	i7-2640M	4GBx1	12.5" HD Prem	720p	320G 7200	Optional	Optional	Intel 6205	WWAN upg	Fing	Blue	***9***	vPro	G P	Pro 64

- ***Part of the Global Models Plus program with limited onsite service[24] 3-year limited warranty***
- ***Microsoft® Office 2010 Product Key Ready (O10PKR)***

Positioning	*An ultraportable for the executive on the move; one spindle*
Processor	**Intel® Core™ i5-2520M processor (dual-core, 2.50GHz, 3MB Cache)**, DDR3 memory controller (up to 1333MHz), Intel Turbo Boost 2.0 (3.20GHz), HT technology **Intel Core i5-2540M processor (dual-core, 2.60GHz, 3MB Cache)**, DDR3 memory controller (up to 1333MHz), Intel Turbo Boost 2.0 (3.30GHz), HT technology **Intel Core i7-2620M processor (dual-core, 2.70GHz, 4MB Cache)**, DDR3 memory controller (up to 1333MHz), Intel Turbo Boost 2.0 (3.40GHz), HT technology **Intel Core i7-2640M processor (dual-core, 2.80GHz, 4MB Cache)**, DDR3 memory controller (up to 1333MHz), Intel Turbo Boost 2.0 (3.50GHz), HT technology
Memory	8GB max[7] / PC3-10600 1333MHz DDR3, non-parity, dual-channel capable, two 204-pin SO-DIMM sockets
Optical Ultrabay SATA disk	Option for ThinkPad Ultrabase Series 3 Supports Ultrabay Slim devices in optional or standard ThinkPad Ultrabase Series 3 (0A33932) *Some:* Solid State Drive (SSD) / SATA 3.0Gb/s, 2.5" wide, 7mm high *Some:* Hard Disk Drive / SATA 3.0Gb/s, 2.5" wide, 7mm high, Active Protection System™ *All:* removable, upgradable, Shock Mounted Hard Drive, supports the second disk in optional or standard ThinkPad Ultrabase Series 3
mSATA™ SSD	None
Widescreen display	*Some:* **12.5"** (317.5mm) **HD (1366x768) TFT color**, anti-glare, LED backlight, 200 nits, 16:9 aspect ratio, 300:1 contrast ratio *Some:* (Premium) **12.5"** (317.5mm) **HD (1366x768) TFT color**, anti-glare, LED backlight, 300 nits, 16:9 aspect ratio, 500:1 contrast ratio, IPS, WideView (170° viewing)
Camera	*Some:* HD720p resolution, wider view angle, low light sensitive, fixed focus
Graphics	**Intel HD Graphics 3000** in processor, external analog monitor support via VGA DB-15 connector and digital monitor support via DisplayPort (supports single-link DVI-D via cable 45J7915); supports dual independent display; *Maximum external resolution:* 2560x1600 (DisplayPort)@60Hz; 2048x1536 (VGA)@75Hz; 1920x1200@60Hz (single-link DVI-D via cable 45J7915)
Keyboard	7 row, 89-key, ThinkVantage button, spill-resistant, multimedia Fn keys
TrackPoint®	TrackPoint® pointing device, "Press-to-Select," Internet Scroll Bar[13], magnifying glass
Touchpad	UltraNav™, buttonless touchpad below keyboard, multi-touch
ThinkLight™	Illuminates the keyboard to improve visibility in low-light conditions
Dimensions[3]	*without UltraBase; 4/6-cell:* 12.0" x 8.13" x 0.75-1.36"; 305mm x 206.5mm x 19.0-34.6mm
Weight[2]	*4-cell:* from 2.97 lb (1.35kg); *6-cell:* from 3.31 lb (1.50kg); *9-cell:* from 3.67 lb (1.67kg)
Case material	*Display cover:* Magnesium + PCABS; *Bottom:* Magnesium alloy
Standard Battery	Lithium Ion 4-cell, 6-cell, or 9-cell, supports optional external battery (0A36280) as 2nd battery
External Battery	None
Battery - life[10]	*4-cell:* up to 4.1 hr; *6-cell:* up to 9.2 hr; *9-cell:* up to 13.8 hr; *external battery:* up to 9.4 hr; *9-cell plus external battery:* up to 23.2 hr
Chipset	**Mobile Intel QM67 Express Chipset**
Ultrabase	*Option:* ThinkPad Ultrabase Series 3 (see right side)
Multicard reader	4-in-1 reader (SD, SDHC, SDXC, MMC)
ExpressCard	One slot (ExpressCard/34, ExpressCard/54)
Ports	*i7 model:* One USB 3.0, two USB 2.0 (one powered) *other model:* Three USB 2.0 (one powered) external monitor (VGA DB-15, DisplayPort), ethernet (RJ-45)
PCIe Mini Card WLAN[4]	Two PCI Express Mini Card slots *Some:* 11a/b/g/n, PCIe Half Mini Card, Intel Centrino® Advanced-N 6205, 2x2 *Some:* 11a/b/g/n, PCIe Half Mini Card, Intel Centrino Ultimate-N 6300, 3x3
WWAN	Wireless WAN upgradable
Modem	None
Bluetooth™	Bluetooth 3.0 wireless, LED indicator
Ethernet	Intel 82579LM Gigabit Network Connection (Lewisville), PHY, PCIe x1
Intel AMT	Intel Active Management Technology (iAMT)
Audio support	High Definition (HD) Audio, Conexant 20672 codec / stereo speakers, 1 watt x 2 / volume up, down, mute buttons / dual array microphone, combo audio/mic jack
Security	Power-on password, hard disk password, supervisor password, security keyhole
Security chip	Trusted Platform Module, TCG 1.2-compliant
Fingerprint reader	UPEK Fingerprint reader on palm rest, swipe sensor, LED indicator, Power On Authentication, supports the security chip
Limited warranty[12]	**3-years**/1-year battery, **limited onsite service**[24], 8 am - 5 pm, Mon - Fri coverage excluding holidays, next business day response time / service upgrades[22] available

Preloaded operating system[20]
- Genuine Windows® 7 Professional 64

Ready to install applications[14] (all OSes; only some listed)
- Rescue and Recovery™
- Access Connections™
- Fingerprint Software (fingerprint models)
- Password Manager (fingerprint models)
- ThinkVantage System Update
- ThinkVantage Power Manager
- ThinkVantage Toolbox

Preloaded applications[14] (all OSes; only some listed)
- Norton™ Internet Security 2011 (30 days of virus definitions)
- Adobe® Reader®
- Skype™ for Windows
- Windows Live™ Essentials
- Microsoft Office 2010 preloaded; purchase product key to activate
- Corel® WinDVD® (DVD±RW)
- Corel Burn.Now™ Lenovo Edition (DVD±RW)
- Corel DVD MovieFactory® Lenovo Edition (DVD±RW)

Supports ThinkVantage® technologies

ThinkPad Ultrabase Series 3
- Provides desktop expansion and cable management for X220 and X220 Tablet
- Easily connects to the bottom of the X220 or X220 Tablet for traveling
- Converts ThinkPad to a two-spindle system with optional Ultrabay Slim accessories in right side:
  - DVD-ROM Ultrabay Slim Drive II SATA 1.5G/s 43N3292
  - Serial ATA Hard Drive Bay Adapter III 43N3412
    Disks supported (some):
    - 128GB 2.5" SSD II 0A33984

Other features:
- Power button (front)
- Security key lock, security keyhole
- Analog VGA DB-15 monitor port
- DisplayPort (supports single-link DVI-D via cable 45J7915)
- Four USB 2.0 ports
- Gigabit ethernet (RJ-45) port
- Microphone in and headphone out
- Requires 65W or 90W AC adapter
- 1.39 lb; 630g

65-watt AC Adapter
ENERGY STAR® 5.0-compliant
ROHS-compliant
International Warranty Service[17]
24 hour x 7 day[18] toll-free support during the warranty period[12] via 800-426-7378

See footnotes for more detailed information
US model(s) announced May 3 or October 4, 2011

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ThinkPad® X220i (4287) - TopSeller

Type-model	Processor	Memory	Wide-screen display	Camera	Disk SATA GB[8] rpm	Optical in UltraBase	ThinkPad Ultrabase Series 3	PCIe Mini Card WLAN	PCIe Mini Card WWAN	Finger print reader	Blue-tooth	Bat-tery cells	Intel vPro	Preload
4287-2UU	i3-2310M	4GBx1	12.5" HD	720p	320G 7200	Optional	Optional	Intel 1000	WWAN upg	None	None	6	None	Pro 64
4287-3ZU	i3-2350M	4GBx1	12.5" HD	720p	320G 7200	Optional	Optional	Intel 1000	WWAN upg	None	None	6	None	Pro 64

- ***Small and medium business (SMB) model(s), part of the US TopSeller™ Program***
- ***A depot repair service 3-year limited warranty***
- ***Microsoft® Office 2010 Product Key Ready (O10PKR)***

Positioning	*An ultraportable for the executive on the move; one spindle*
Processor	**Intel® Core™ i3-2310M processor (dual-core, 2.10GHz, 3MB Cache)**, DDR3 memory controller (up to 1333MHz), HT technology **Intel Core i3-2350M processor (dual-core, 2.30GHz, 3MB Cache)**, DDR3 memory controller (up to 1333MHz), HT technology
Memory	8GB max[7] / PC3-10600 1333MHz DDR3, non-parity, dual-channel capable, two 204-pin SO-DIMM sockets
Optical Ultrabay SATA disk	Option for ThinkPad Ultrabase Series 3 Supports Ultrabay Slim devices in optional or standard ThinkPad Ultrabase Series 3 (0A33932) *Some:* Solid State Drive (SSD) / SATA 3.0Gb/s, 2.5" wide, 7mm high *Some:* Hard Disk Drive / SATA 3.0Gb/s, 2.5" wide, 7mm high, Active Protection System™ *All:* removable, upgradable, Shock Mounted Hard Drive, supports the second disk in optional or standard ThinkPad Ultrabase Series 3
mSATA™ SSD	None
Widescreen display	**12.5"** (317.5mm) **HD (1366x768) TFT color**, anti-glare, LED backlight, 200 nits, 16:9 aspect ratio, 300:1 contrast ratio
Camera	HD720p resolution, wider view angle, low light sensitive, fixed focus
Graphics	**Intel HD Graphics 3000** in processor, external analog monitor support via VGA DB-15 connector and digital monitor support via DisplayPort (supports single-link DVI-D via cable 45J7915); supports dual independent display; *Maximum external resolution:* 2560x1600 (DisplayPort)@60Hz; 2048x1536 (VGA)@75Hz; 1920x1200@60Hz (single-link DVI-D via cable 45J7915)
Keyboard	7 row, 89-key, ThinkVantage button, spill-resistant, multimedia Fn keys
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Case material	*Display cover:* Magnesium + PCABS; *Bottom:* Magnesium alloy
Standard Battery	Lithium Ion 4-cell, 6-cell, or 9-cell, supports optional external battery (0A36280) as 2nd battery
External Battery	None
Battery - life[10]	*4-cell:* up to 4.1 hr; *6-cell:* up to 9.2 hr; *9-cell:* up to 13.8 hr; *external battery:* up to 9.4 hr; *9-cell plus external battery:* up to 23.2 hr
Chipset	**Mobile Intel QM67 Express Chipset**
Ultrabase	*Option:* ThinkPad Ultrabase Series 3 (see right side)
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PCIe Mini Card	Two PCI Express Mini Card slots
WLAN[4]	11b/g/n, PCIe Half Mini Card, Intel Centrino® Wireless-N 1000, 1x2
WWAN	Wireless WAN upgradable
Modem	None
Bluetooth™	None
Ethernet	Intel 82579LM Gigabit Network Connection (Lewisville), PHY, PCIe x1
Intel AMT	None
Audio support	High Definition (HD) Audio, Conexant 20672 codec / stereo speakers, 1 watt x 2 / volume up, down, mute buttons / dual array microphone, combo audio/mic jack
Security	Power-on password, hard disk password, supervisor password, security keyhole
Security chip	Trusted Platform Module, TCG 1.2-compliant
Fingerprint reader	None
Limited warranty[12]	**3-years**/1-yr battery - depot repair service / service upgrades[22] available

Preloaded operating system[20]
- Genuine Windows® 7 Professional 64

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US model(s) announced March 1 or October 4, 2011

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